

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.06.2022

Version 4 (replaces version 3)

Revision: 02.06.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** OTTOPUR Turbo Komp. A
- **UFI:** 7TG2-R03Q-P00G-4D6Y
- **Product category** PC1 Adhesives, sealants
- **Application of the substance / the mixture** Assembly foam
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Hermann Otto GmbH
Krankenhausstraße 14
D-83413 Fridolfing
Tel.: 0049/(0)8684/908-0
Fax.: 0049/(0)8684/908-1840
- **Further information obtainable from:**
Tel.: 0049- (0)8684- 908- 2363 (-4300)
E-Mail: alois.parzinger@otto-chemie.de
- **1.4 Emergency telephone number:**
Tel.: 0049- (0) 89- 192 40 (emergency telephone no.)
+44 1865 407333 (Carechem 24)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Acute Tox. 4 H302 Harmful if swallowed.
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
Reaction products of phosphoryl trichloride and 2-methyloxirane
Polyetherpolyol, bromiert
2,2'-oxybisethanol
- **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
- **Precautionary statements**
P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves / eye protection / face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 1244733-77-4 EC number: 807-935-0	Reaction products of phosphoryl trichloride and 2-methyloxirane ⚠ Acute Tox. 4, H302	50-100%
EC number: 926-564-6 Reg.nr.: 01-2119971810-36-xxxx	Polyetherpolyol, bromiert ⚠ Acute Tox. 4, H302	<25%
CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxybisethanol ⚠ Acute Tox. 4, H302	<10%
CAS: 25214-63-5	ethylenediamine, propoxylated ⚠ Eye Irrit. 2, H319	<5%
CAS: 2212-32-0 EINECS: 218-658-4	2-[[2-(dimethylamino)ethyl]methylamino]ethanol ⚠ Skin Corr. 1C, H314; Eye Dam. 1, H318	<2.5%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

· **After skin contact**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing**

Do not induce vomiting; call for medical help immediately. Show container or label.

· 4.2 Most important symptoms and effects, both acute and delayed

After inhalation: dry throat/neck pain. Cough. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Running of the nose. CONSEQUENTIAL SYMPTOMS MAY OCCURE:

Possible inflammation of the respiratory tract. Pulmonary edema possible. Difficulty breathing. After skin contact: Tingles/irritation of the skin. After eye contact: Irritation of the eye tissue. Lachrymal flow.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with full jet.

· 5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

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- **5.3 Advice for firefighters**
- **Protective equipment:**
Mount respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Allow to solidify. Pick up mechanically.
- **6.4 Reference to other sections** See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
see item 8: Personal protective equipment
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**

111-46-6 2,2'-oxybisethanol
WEL Long-term value: 101 mg/m³, 23 ppm
- **DNELs**

1244733-77-4 Reaction products of phosphoryl trichloride and 2-methyloxirane
Dermal Worker, systemic (long term) 2.91 mg/kg/Tag (rat)
Inhalative Worker, systemic (long term) 8.2 mg/m³ (rat)
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see item 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

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- **Respiratory protection:**
This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
- **Hand protection** Protective gloves.
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Recommended glove types: nitrile rubber
Recommended thickness of the material: >0,4 mm
- **Penetration time of glove material** Breakthrough time: 10 - 30 min
- **Eye/face protection** Safety glasses
- **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
 - **General Information**
 - **Physical state** Fluid
 - **Colour:** According to product specification
 - **Odour:** Characteristic
 - **Melting point/freezing point:** undetermined
 - **Boiling point or initial boiling point and boiling range** Not applicable.
 - **Lower and upper explosion limit**
 - **Lower:** Not determined.
 - **Upper:** Not determined.
 - **Flash point:** 101 °C
 - **Auto-ignition temperature:** 385 °C
 - **Decomposition temperature:** Not determined.
 - **pH** Not determined.
 - **Viscosity:** Not determined.
 - **Solubility**
 - **Water:** Not miscible or difficult to mix
 - **Partition coefficient n-octanol/water (log value)** Not determined.
 - **Vapour pressure:** Not determined.
 - **Density and/or relative density**
 - **Density:** see technical datasheet
 - **Relative density** Not determined.
 - **Vapour density** Not applicable.
 - **Relative gas density** undetermined
 - **Particle characteristics** undetermined
- **9.2 Other information**
 - **Form:** pasty
 - **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
- **Information with regard to physical hazard classes**
- **Aerosols** Void
- **Flammable liquids** Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
Avoid strong heating.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidizing agents, alkalis, amines, strong acids
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**

1244733-77-4 Reaction products of phosphoryl trichloride and 2-methyloxirane

Oral LD50 632 mg/kg (rat)

Inhalative LC50/4 h >7 mg/l (rat)

Polyetherpolyol, bromiert

Oral LD50 732 mg/kg (rat)

Dermal LD50 >2,000 mg/kg (rab)

111-46-6 2,2'-oxybisethanol

Oral LD50 12,565 mg/kg (rat)

Dermal LD50 11,890 mg/kg (rbt)

25214-63-5 ethylenediamine, propoxylated

Oral LD50 2,001 mg/kg (rat)

Dermal LD50 2,001 mg/kg (rab)

2212-32-0 2-[[2-(dimethylamino)ethyl]methylamino]ethanol

Oral LD50 >2,000 mg/kg (rat)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**

1244733-77-4 Reaction products of phosphoryl trichloride and 2-methyloxirane: List II

Polyetherpolyol, bromiert: List II

SECTION 12: Ecological information

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

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SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Observe local by-laws.

Already cured material can be disposed of with the domestic or commercial waste. Unconsumed material (fluid, paste-like) is to dispose of as hazardous waste.

· Uncleaned packaging:

· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· 14.1 UN number or ID number

· ADR, ADN, IMDG, IATA

Void

· 14.2 UN proper shipping name

· ADR, ADN, IMDG, IATA

Void

· 14.3 Transport hazard class(es)

· ADR, ADN, IMDG, IATA

· Class

Void

· 14.4 Packing group

· ADR, IMDG, IATA

Void

· 14.5 Environmental hazards:

Not applicable.

· 14.6 Special precautions for user

Not applicable.

· 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

· Transport/Additional information:

Not dangerous according to the above specifications.

· UN "Model Regulation":

Void

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· National regulations

· Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

· Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Details of international registration status:

Listed on or in accordance with the following inventories:

REACH - Europe listed

DSL - Canada not listed

NZIoC - New Zealand not listed

TCSI - Taiwan not listed

TSCA - USA not listed

AICS - Australia not listed

ECL - Korea not listed

IECSC - China not listed

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ENCS - Japan not listed

PICCS - Philippines not listed

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

· **Department issuing SDS:** Tel.: 0049- (0)8684- 908- 2363

· **Contact:** Tel.: 0049- (0)8684- 908- 2363 (-4300)

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· *** Data compared to the previous version altered.**

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Revision: 21.06.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** **OTTOPUR Turbo Komp. B**
- **UFI:** XMD1-90DQ-S00H-VH99
- **Product category** PC1 Adhesives, sealants
- **Application of the substance / the mixture** Assembly foam
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Hermann Otto GmbH
Krankenhausstraße 14
D-83413 Fridolfing
Tel.: 0049/(0)8684/908-0
Fax.: 0049/(0)8684/908-1840
- **Further information obtainable from:**
Tel.: 0049- (0)8684- 908- 2363 (-4300)
E-Mail: alois.parzinger@otto-chemie.de
- **1.4 Emergency telephone number:**
Tel.: 0049- (0) 89- 192 40 (emergency telephone no.)
+44 1865 407333 (Carechem 24)

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 Carc. 2 H351 Suspected of causing cancer.
 STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



Acute Tox. 4 H332 Harmful if inhaled.
 Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labelling:**
diphenylmethanediisocyanate, isomers and homologues
- **Hazard statements**
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H335 May cause respiratory irritation.

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Trade name: OTTOPUR Turbo Komp. B

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H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P102 *Keep out of reach of children.*

P271 Use only outdoors or in a well-ventilated area.

P280 *Wear protective gloves / eye protection / face protection.*

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Additional information:

Additional information:
Contains isocyanates. May produce an allergic reaction.

As from 24 August 2023 adequate training is required before industrial or professional use.

2.3 Other hazards

Information according to REACH- Annex XVII.56

- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.

- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.

- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

Results of PBT and vPvB assessment

• **PBT:** Not applicable.


· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues	<50%
Reg.nr.: EG: Polymer	 Resp. Sens. 1 H334: Carc. 2 H351: STOT RE 2 H373:	

 Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373;
 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;
 Skin Sens. 1, H317; STOT SE 3, H335. EUH204

Specific concentration limits: Skin Irrit. 2: H315: C ≥ 5 %

Eye Irrit. 2: H319: C ≥ 5 %

Resp. Sens. 1; H334: C ≥ 0.1 %

STOT SE 3: H335: C $\geq 5\%$

CAS: 72088-97-2	Isocyanate- Prepolymer MDI based	<50%
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Reg.nr.: EG: Polymer

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CAS: 101-68-8	diphenylmethane-4,4'-di-isocyanate	<50%
EINECS: 202-966-0	⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373;	
Reg.nr.: 01-2119457014-47-xxxx	⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;	
	Skin Sens. 1, H317; STOT SE 3, H335, EUH204	
	Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 %	
	Eye Irrit. 2; H319: C ≥ 5 %	
	Resp. Sens. 1; H334: C ≥ 0.1 %	
	STOT SE 3; H335: C ≥ 5 %	
CAS: 5873-54-1	diphenylmethane-2,4'-diisocyanate	<10%
EINECS: 227-534-9	⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373;	
Reg.nr.: 01-2119480143-45-xxxx	⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;	
	Skin Sens. 1, H317; STOT SE 3, H335, EUH204	
	Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 %	
	Eye Irrit. 2; H319: C ≥ 5 %	
	Resp. Sens. 1; H334: C ≥ 0.1 %	
	STOT SE 3; H335: C ≥ 5 %	
CAS: 2536-05-2	diphenylmethane-2,2'-diisocyanate	<1%
EINECS: 219-799-4	⚠ Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373;	
	⚠ Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319;	
	Skin Sens. 1, H317; STOT SE 3, H335, EUH204	
	Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 %	
	Eye Irrit. 2; H319: C ≥ 5 %	
	Resp. Sens. 1; H334: C ≥ 0.1 %	
	STOT SE 3; H335: C ≥ 5 %	

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

· After skin contact

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

· After swallowing

Do not induce vomiting; call for medical help immediately. Show container or label.

· 4.2 Most important symptoms and effects, both acute and delayed

After inhalation: dry throat/neck pain. Cough. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Running of the nose. CONSEQUENTIAL SYMPTOMS MAY OCCURE:

Possible inflammation of the respiratory tract. Pulmonary edema possible. Difficulty breathing. After skin contact: Tingles/irritation of the skin. After eye contact: Irritation of the eye tissue. Lachrymal flow.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture**
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Mount respiratory protective device.
Do not inhale explosion gases or combustion gases.
- **Additional information** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Allow to solidify. Pick up mechanically.
- **6.4 Reference to other sections** See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
see item 8: Personal protective equipment
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Fumes can combine with air to form an explosive mixture.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues
WEL Short-term value: 0.07 mg/m³
Long-term value: 0.02 mg/m³
Sen; as -NCO

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101-68-8 diphenylmethane-4,4'-di-isocyanateWEL Short-term value: 0.07 mg/m³Long-term value: 0.02 mg/m³

Sen; as -NCO

5873-54-1 diphenylmethane-2,4'-diisocyanateWEL Short-term value: 0.07 mg/m³Long-term value: 0.02 mg/m³

Sen; as -NCO

2536-05-2 diphenylmethane-2,2'-diisocyanateWEL Short-term value: 0.07 mg/m³Long-term value: 0.02 mg/m³

Sen; as -NCO

Ingredients with biological limit values:**101-68-8 diphenylmethane-4,4'-di-isocyanate**

BMGV 1 µmol creatinine/mol

Medium: urine

Sampling time: At the end of the period of exposure

Parameter: isocyanate-derived diamine

5873-54-1 diphenylmethane-2,4'-diisocyanate

BMGV 1 µmol creatinine/mol

Medium: urine

Sampling time: At the end of the period of exposure

Parameter: isocyanate-derived diamine

2536-05-2 diphenylmethane-2,2'-diisocyanate

BMGV 1 µmol creatinine/mol

Medium: urine

Sampling time: At the end of the period of exposure

Parameter: isocyanate-derived diamine

· **Additional information:** The lists valid during the making were used as basis.**8.2 Exposure controls**· **Appropriate engineering controls** No further data; see item 7.· **Individual protection measures, such as personal protective equipment**· **General protective and hygienic measures**

The usual precautionary measures are to be adhered to when handling chemicals.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

· **Hand protection** Protective gloves.· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Recommended glove material: Butyl rubber, BR

Recommended thickness of the material: >0,4 mm

· **Penetration time of glove material** Breakthrough time: 10 - 30 min· **Eye/face protection** Safety glasses· **Body protection:** Protective work clothing.**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**· **Physical state**

Fluid

· **Colour:**

According to product specification

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· Odour:	Characteristic
· Melting point/freezing point:	undetermined
· Boiling point or initial boiling point and boiling range	208 °C
· Lower and upper explosion limit	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	212 °C
· Auto-ignition temperature:	Product is not selfigniting.
· Decomposition temperature:	Not determined.
· pH	Not determined.
· Viscosity:	Not determined.
· Solubility	
· Water:	Hydrolized
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure:	Not determined.
· Density and/or relative density	
· Density:	see technical datasheet
· Relative density	Not determined.
· Vapour density	Not applicable.
· Relative gas density	undetermined
· Particle characteristics	undetermined
· 9.2 Other information	
· Form:	pasty
· Ignition temperature:	400 °C
· Explosive properties:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· Information with regard to physical hazard classes	
· Aerosols	Void
· Flammable liquids	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
Avoid strong heating.
- **10.3 Possibility of hazardous reactions**
Danger of receptacles bursting because of high vapour pressure when heated
- **10.5 Incompatible materials:** Strong oxidizing agents, alkalis, amines, strong acids
- **10.6 Hazardous decomposition products:**
Hydrogen chloride (HCl)
Hydrogen cyanide (prussic acid)
see item 5.2

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if inhaled.
- **LD/LC50 values relevant for classification:**
9016-87-9 diphenylmethanediisocyanate, isomeres and homologues
Oral LD50 >10,000 mg/kg (rat)

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Dermal LD50 >9,400 mg/kg (rbt)

Inhalative LC50/4 h 0.49 mg/l (rat)

101-68-8 diphenylmethane-4,4'-di-isocyanate

Oral LD50 >10,000 mg/kg (rat)

Dermal LD50 >9,400 mg/kg (rbt)

5873-54-1 diphenylmethane-2,4'-diisocyanate

Oral LD50 >2,000 mg/kg (rat)

Dermal LD50 9,400 mg/kg (rbt)

Inhalative LC50/4 h 0.387 mg/l (rat)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Respiratory or skin sensitisation**
Sensitive people may react strongly to minimal concentrations. We advise asthmatics and people who tend to diseases of the respiratory tracts against the contact with this product.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **Carcinogenicity** Suspected of causing cancer.
- **STOT-single exposure** May cause respiratory irritation.
- **STOT-repeated exposure** May cause damage to organs through prolonged or repeated exposure.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Observe local by-laws.
Already cured material can be disposed of with the domestic or commercial waste. Unconsumed material (fluid, paste-like) is to dispose of as hazardous waste.
- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, ADN, IMDG, IATA** Void

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- **14.2 UN proper shipping name**
- **ADR, ADN, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:** Not applicable.
- **14.6 Special precautions for user** Not applicable.
- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above specifications.
- **UN "Model Regulation":** Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **National regulations**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Details of international registration status:**
Listed on or in accordance with the following inventories:

REACH - Europe	listed
AICS - Australia	not listed
DSL - Canada	not listed
ECL - Korea	not listed
IECSC - China	not listed
ENCS - Japan	not listed
NZIoC - New Zealand	not listed
PICCS - Philippines	not listed
TCSI - Taiwan	not listed
TSCA - USA	not listed
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- EUH204 Contains isocyanates. May produce an allergic reaction.

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· **Department issuing SDS:** Tel.: 0049- (0)8684- 908- 2363

· **Contact:** Tel.: 0049- (0)8684- 908- 2363 (-4300)

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

· *** Data compared to the previous version altered.**

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